Mechanically Cleaned Filters and Strainers

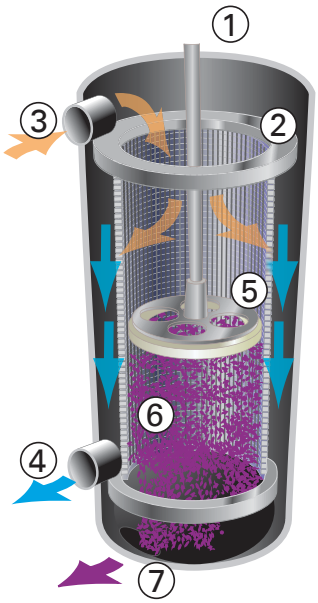
DCF, MCF, MCS

Unbeatable reliability with measurable ROI

PERMANENT MEDIA WITH DISC CLEANING TECHNOLOGY

- Elimination of or reduction in disposable filter elements to reduce operator intervention, inventory costs and landfill waste
- Minimum contaminant purge for a reduction in product loss
- Reduction in or elimination of operator intervention for safer operation
- Virtually maintenance-free, negligible downtime
- Compact design, lower capital cost to fit most installations
- Choice of pneumatic, motor drive or magnetic actuation
- Stainless steel screens from 15-micron slots to 1/4" perforations to handle a wide range of filtration needs
- Short payback time and increased ROI

Eaton's unique spring-loaded cleaning disc (shown here in an MCS-500) ensures precise contact with the filtration screen to thoroughly and uniformly clean the media.



TYPICAL APPLICATIONS

• Paper coatings • PCC/GCC slurries • Phenolic resins • Detergents
• Petroleum-based greases • Ethanol processing • Hot fry oils
• CIP fluids (sodium hydroxide) • Starch • Lime slurries • Adhesives
• Curtain coaters • Nutraceuticals • Machining coolants • Paint
• Ink • Chocolate • Edible oils • Tallow

Collect, concentrate, expel

Eaton's mechanically cleaned filters are based on a simple concept: A cylindrical stainless steel housing (1) contains a filter screen (2); unfiltered liquids enter the inlet (3); solids are deposited on the interior surface of the filtration screen; and filtered fluid exits at the outlet (4).

When the media requires cleaning (based on time, differential pressure and manual selection), a spring- loaded cleaning disc (5) moves up and down, wiping the media clean of concentrated solids in both strokes. Once the debris is removed from the slotted screen, the cleaning disc directs the contaminant to the bottom of the housing (6) and out of the flow path (7).

This cleaning process happens while the filter remains in service, thereby maintaining process efficiency and dramatically reducing loss of valuable product.

Choice of actuation method

Pneumatic – The cleaning disc can be actuated by air pressure alone (5 bar @ 142 l/min.). DCF-800D and DCF-1600D models feature single or twin air cylinders. The smaller DCF-400D is equipped with a single cylinder.

Pneumatic with magnetic coupling – MCS and MCF series utilize magnets to eliminate the need for cover thru-holes and their associated seals. This cost-effective method reduces maintenance and lengthens operating life.

Motorized – The DCF-2000 series uses a motor to drive the cleaning disc through higher viscosity fluids and other challenging conditions.

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Mechanically Cleaned Filters

DCF-1600D

DCF-800D

DCF Series

When processing water and water-like liquids and a low initial investment is demanded, this series delivers tremendous benefits.

DCF-2000

DCF-2000 Series

Designed specifically for the needs of the pulp and paper industry, the DCF-2000 features a rugged motorised cleaning action, which can handle the continuous processing requirements of protecting critical wet-end coating operations.

High-Flow MCS Strainer

Engineered to conserve valuable process water while protecting costly equipment from debris, the MCS features fast-cleaning magnetically coupled actuation. This high-flow strainer uses a magnetically coupled cleaning disc, which eliminates the need for cover thru-holes and their associated seals.

MCS-500

DCF with Twin Actuation

Designed for the rigours of processing highly viscous, abrasive, sticky or otherwise hard-to-process liquids, the Twin Actuation is ideal for a broad spectrum of challenging applications.

DCF-1600D with twin actuation

MCF

MCF Series

The MCF features a magnetically coupled cleaning disc, which eliminates the need for cover thru-holes and their associated seals. The MCF was designed specifically for the most challenging process liquids and conditions, and features the fastest cleaning action of the mechanically cleaned family.

	DCF-400D	DCF-800D	DCF-1600D	DCF-2000	MCF	MCS-500	MCS-1500
Total volume (litres)	4.6	15.0	42.0	41.6	41.6	70.8	186.2
Flow rate range at 100 µm (m^3/h)	max. 4.5	max. 13.6	max. 45.4	max. 45.4	max. 45.4	max. 112.5	max. 337.5

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Disc-Cleaning Filters

DCF-400D
DCF-800D
DCF-1600D

Mechanically Cleaned

Permanent Media

DCF-1600D

DCF-400D

DCF-800D – One actuator delivers simple, reliable operation with water-like liquids. Ideal where a low initial investment is a key driving factor

The Eaton DCF series is ideal for highly viscous, abrasive or sticky liquids. The DCF units operate at a consistently low differential pressure and deliver simple, reliable operation in which a low initial investment is a key driving factor.

FEATURES

- Elimination of or reduction in disposable filter elements to reduce operator intervention, inventory costs and landfill waste
- Minimum contaminant purge in a highly concentrated waste stream for a reduction in product loss
- Reduction in or elimination of operator intervention for safer operation
- Virtually maintenance-free, negligible downtime
- Compact design, lower capital cost to fit most installations
- Stainless steel screens from 15-micron slots to 1/4" perforations to handle a wide range of filtration needs
- Available with UHMWPE, urethane, Teflon or Kynar® cleaning discs

When processing water and water-like liquids and a low initial investment is demanded, DCF single actuator models deliver tremendous benefits. Available in 400, 800 and 1600 sizes, the DCF series enables operation at a vast range of flow rates and retentions.

The DCF-800D and DCF-1600D are also available in twin actuator models, which are designed for the rigours of processing highly viscous, abrasive, sticky or otherwise hard-to-process liquids. DCF filters are suitable for a broad spectrum of challenging applications and accommodate a wide range of flow and retention requirements.

DCF-1600D – Two actuators isolate the actuation mechanism from the filtrate with a bridged system. The benefit is a long operating life in challenging conditions.

DCF-800D twin actuator model

TYPICAL APPLICATIONS

• Paper coatings • PCC/GCC slurries • Phenolic resins • Detergents
• Petroleum-based greases • Ethanol processing • Hot fry oils
• CIP fluids (sodium hydroxide) • Starch • Lime slurries • Adhesives
• Curtain coaters • Nutraceuticals • Machining coolants • Paint
• Ink • Chocolate • Edible oils • Tallow

Our unique circular cleaning disc design (MCF design shown) ensures precise contact with the screen to thoroughly and uniformly clean the media.

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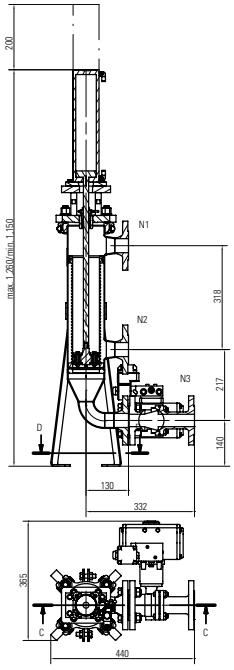
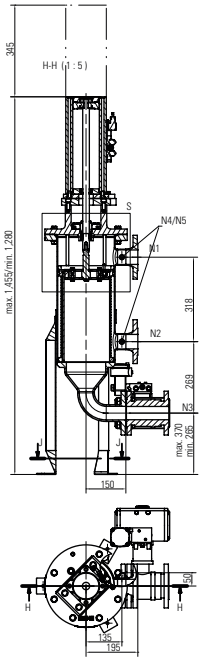
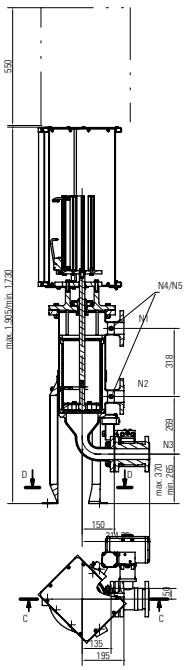


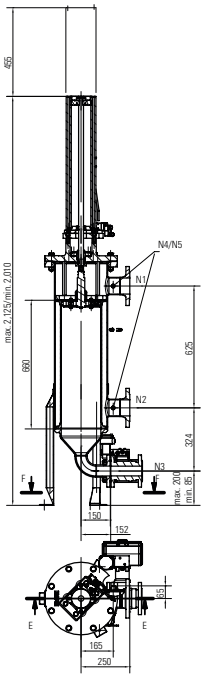
DCF-400D



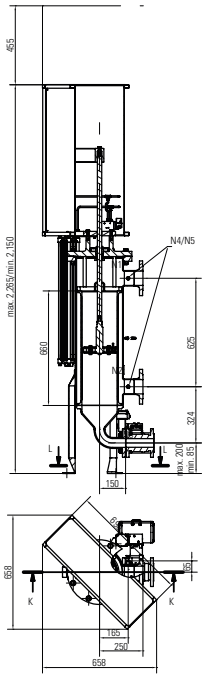
DCF-800D



DCF-800D
Twin



DCF-1600D



DCF-1600D
Twin

	DCF-400D	DCF-800D	DCF-1600D
Single unit weight	approx. 21 kg	approx. 45 kg	approx. 156 kg
Service height	approx. 1,460 mm	approx. 1,800 mm	approx. 2,720 mm
Total volumetric capacity	approx. 4.6 litres	approx. 15.0 litres	approx. 42.0 litres
Purge chamber capacity	approx. 0.2 litres	approx. 0.9 litres	approx. 2.5 litres
Filtration surface area	722 cm^2	1704 cm^2	3995 cm^2
Max. flow rate	max. 6.5 m^3/h	max. 13 m^3/h	max. 40 m^3/h
Temperature, maximum*	10 – 200 °C	10 – 200 °C	10 – 200 °C
Pressure, maximum	1.5 – 10 bar	1.5 – 10 bar	1.5 – 10 bar
Air requirements for single actuator	5.5 bar @ 142 l/min.	5.5 bar @ 142 l/min.	5.5 bar @ 142 l/min.
Housing connections N1/N2/N3 (inlet, outlet, purge)	DN40 PN16	DN50 PN16	DN80 PN16; DN50 PN16

* Dependent on elastomer seal and cleaning disc material selection.

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QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001

Disc-Cleaning Filters

DCF-2000

Mechanically Cleaned

Permanent Media

DCF-2000 single configuration

Eaton's DCF-2000 is designed specifically to address the challenges associated with filtering coatings and slurries in the paper making industry. Eliminate paper breaks and streaks, reduce the environmental impact, and maximise uptime and productivity – for high production volumes and consistent product quality.

FEATURES

- Filters coatings with 48% to 72% dry solid content, at 75 microns and above – the tightest in the industry
- Continuously removes contaminants from the coating and efficiently purges collected contaminants while operating at a low, constant differential pressure
- Designed for continuous automatic operation – without the need for operator intervention
- Mechanical cleaning eliminates replacement media cost and reduces the expense of waste disposal
- Increased profitability – improves system efficiency, reduces paper breaks and the associated downtime
- Multiplex configurations available and connected to a common tapered header for high-flow applications

TYPICAL APPLICATIONS

- Paper coatings

DCF-2000

With a rugged motorised cleaning action, the DCF-2000 can handle the continuous processing requirements of protecting critical wet-end coating operations.

DCF-2000 multiplex configuration

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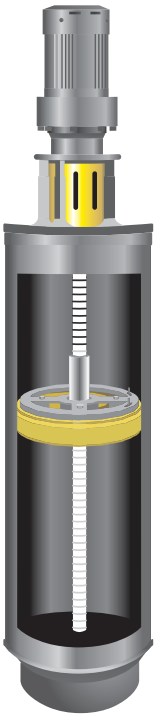
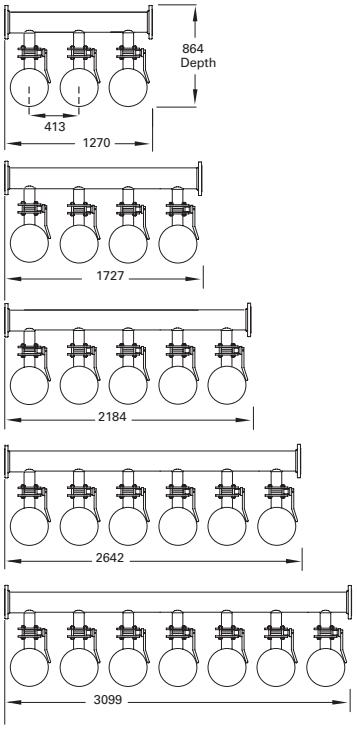
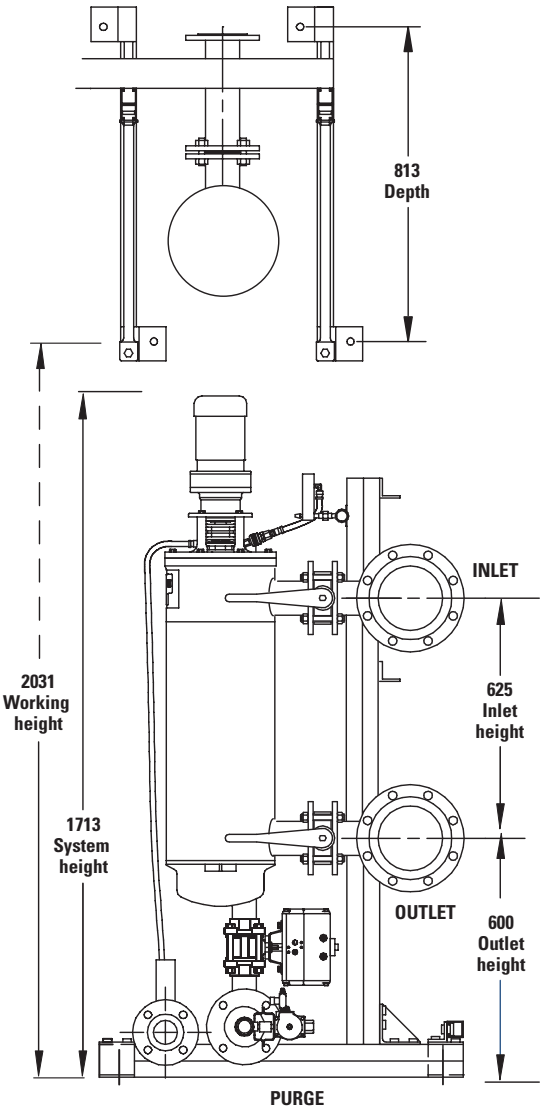


Driven at a constant rate and pressure, the cleaning disc continuously wipes collected debris from the screen. Collected contaminants are agitated in the collection chamber, keeping them in a semi-liquid state, ready to be purged from the system.





DCF-2000: SPECIFICATIONS

Single unit weight	256 kg
Service height	2031 mm
Total volumetric capacity	41.6 litres
Purge chamber capacity	6 litres
Filtration surface area	3935 cm^2
Flow rate range at 100 µm	6.8 – 45.4 m^3/h
Temperature, maximum*	71 °C
Pressure, maximum	10 bar standard
Electrical for motor drive	Single phase 110/220 V, 50/60 Hz for control and three phase, 220/380/440/575 V (please specify), 50/60 Hz for motor.
Electrical for controllers	Single phase 110/220 V, 50/60 Hz

* Dependent on elastomer seal and cleaning disc material selection.

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Magnetically Coupled Filter

MCF

Mechanically Cleaned

Permanent Media

Simplified design uses only 25 total parts

Up to 45.4 m³/h throughput with virtually no downtime with the MCF series magnetically coupled self-cleaning filter. This technology allows for quick and easy access for maintenance, reduces potential leaks and requires few moving parts while providing a long service life.

FEATURES

- Permanent media retains valuable product otherwise lost by media changeout
- Simple design with very few wear parts - for reduced stocking of spare parts
- No external shaft or drive seals – eliminates all associated leakage
- Cleanable permanent media eliminates downtime and disposal requirements
- Easy no-tools access for routine maintenance and service
- Continuous operation – even during cleaning cycles

OPTIONS

- EPT/EPDM (Nordel™) or Viton® seal material
- Advanced programmable microprocessors
- DIN/ASME design units
- Automatic pressure transmitters
- Purge welding, internal and external polishing
- Multi-station configurations
- Air bleed capability

TYPICAL APPLICATIONS

• Paper coatings • PCC/GCC slurries • Phenolic resins • Petroleum-based greases • Ethanol processing • CIP fluids (sodium hydroxide) • Hot fry oils • Starch • Lime slurries • Curtain coaters • Nutraceuticals • Machining coolants • Adhesives • Paint • Ink • Chocolate • Edible oils • Detergents • Tallow

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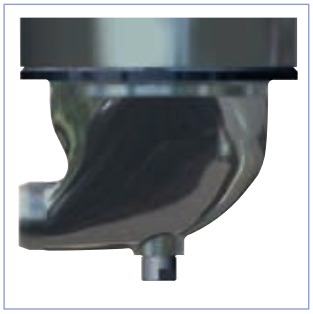
Eaton's MCF, draws upon our rich history of self-cleaning filtration. The innovative, magnetically coupled drive technology, which moves the cleaning disc without the need for external shaft or drive seals, makes the MCF unique. The MCF, a cost effective solution, is designed for a wide range of industrial liquid filtration applications. It also addresses the challenges of environmental concerns, loss of valuable product and demand for greater operator safety.

How the MCF works

Filtrate flows from the top down and from the inside of the media towards the outside to increase retention of contaminants. The unique design uses a spring-loaded cleaning disc that travels top to bottom inside the filter media, removing collected contaminants. The cleaning disc and flow continually drive undesirable solids downwards, where they are concentrated in the purging chamber for easy expulsion. A hollow shaft at the centre of the system contains a piston with powerful rare earth magnets. These internal magnets are coupled to external magnets housed in a carrier connected to the cleaning disc.

Pneumatic actuation moves the inner magnet up and down the shaft, with the outer magnet on the cleaning disc following. The result is powerful actuation, without the need for a physical linkage passing through the vessel.

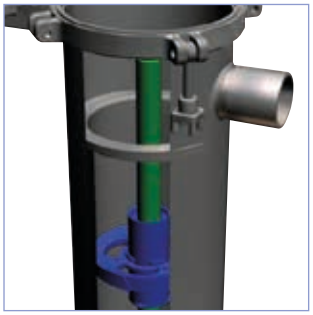
MCF Series Magnetically Coupled Filter



The MCF purge chamber was engineered without horizontal surfaces to facilitate flow dynamics for an extremely thorough purging process.

Choice of stainless steel filters includes wedge wire, rated from 15 – 1,125 microns, or perforated screens for complete removal of large solids.

Quartered spring-loaded cleaning disc combines maximum wear characteristics with optimised cleaning ability.

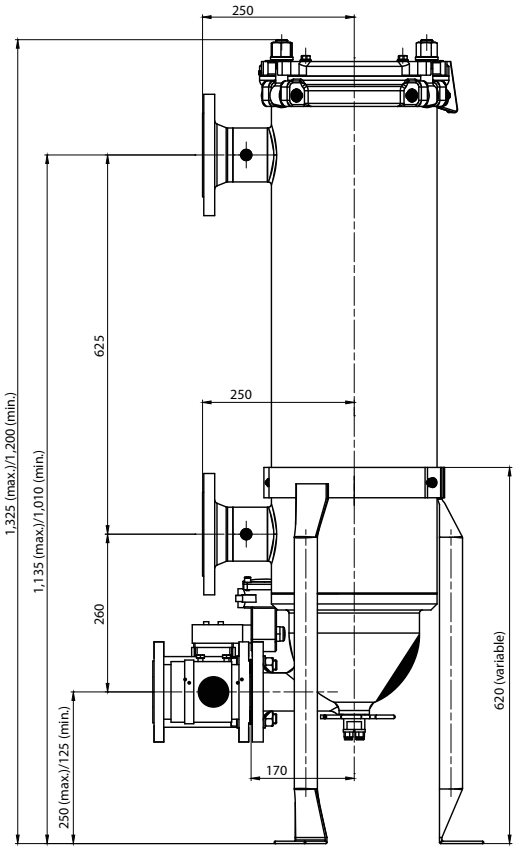


Easy-open lid provides convenient access to internal components. Small footprint (460 x 500 mm) makes it practical to install the MCF in any operation.

MCF STANDARD: SPECIFICATIONS

Single unit weight	91 kg
Service height	1,875 mm
Footprint	498 mm x 457 mm
Volumetric capacity	41.6 litres total
Purge chamber	5 litres capacity
Connections: standard	DN 80 DIN flange DN 50 DIN flange purge
Connections: optional	150# RFSO flange, sanitary, or BSPT – and purge valve options and more
Filtration surface area	3935 cm^2
Media	Wedge wire: 15–1,125 µm, or defined pore: 25–100 µm
Screen	Diameter: 203 mm, length: 610 mm, area: 3,935 cm^2
Flow rate range	6.8–45.4 m^3/h
Temperature, maximum	82 °C
Operating pressure	2–10 bar
Elastomer seal	Optional: EPT/EPDM (Nordel™) or Viton®
Cleaning disc	Standard: Delrin Optional: high-density polyethylene
Housing/wetted parts material	Standard: 316 stainless steel
Controllers	Standard: Siemens LOGO control
Controller options	Semi-automatic electric, PLC
Air for actuator drive (clean, dry, non-lubricated air)	5.5 bar @ 142 l/min.
Electrical for controllers	220 volts, 50 single-phase

* Dependent on elastomer seal and cleaning disc material selection.



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Magnetically Coupled Strainer

High-Flow MCS-500

Mechanically Cleaned

Permanent Media

The MCS-500's magnetically coupled actuation eliminates the need for dynamic seals. This technology provides quick and easy access for maintenance, reduces potential leaks and requires few moving parts while providing a long service life.

Environmentally Sustainable Design

FEATURES

- No dynamic seals
- Minimal purge for low-waste operation
- Easy in-line installation
- Continuous 24/7 operation
- Maintenance-friendly design means lower labour costs
- Eco-friendly. No bags to purchase, change or landfill
- 316 stainless steel vessel

OPTIONS

- Multi-station configuration
- EPT/EPDM (Nordel™) or Viton® seal material
- Advanced programmable microprocessors
- DIN/ASME design units
- Automatic pressure transmitters
- Purge welding
- Air bleed capability
- 304 stainless steel controller enclosure
- Gauge ports: 1/4"

The MCS series is engineered to conserve valuable process water while protecting costly equipment from debris. It offers minimal purge volumes in fresh water applications, allowing you to save on the cost of refill of liquids, chemical treatment and heating energy.

Featuring fast-cleaning magnetically coupled actu-ation, this design offers an optimised configuration to help improve and reduce costly maintenance and downtime. In addition, this actuation method eliminates the need for cover thru-holes and their associated seals.

TYPICAL APPLICATIONS

• Paper coatings • PCC/GCC slurries • Phenolic resins • Petroleum-based greases • Ethanol processing • CIP fluids (sodium hydroxide) • Hot fry oils • Starch • Lime slurries • Curtain coaters • Nutraceuticals • Machining coolants • Adhesives • Paint • Ink • Chocolate • Edible oils • Detergents • Tallow

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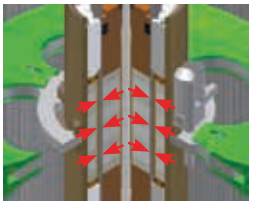


The actuation piston and cleaning disc are coupled by powerful magnets, a simple design that delivers tremendous benefits by eliminating the need for shaft or external drive seals.

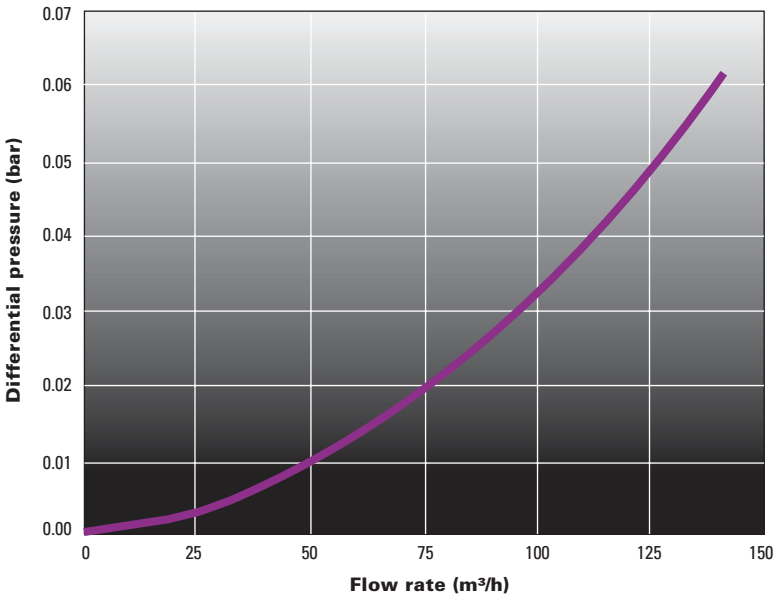
High-Flow MCS-500: Magnetically Coupled Strainer

HIGH-FLOW MCS-500: SPECIFICATIONS

Approx weight	159 kg
Service height	1,686 mm
Flow rates at 100 µm	114 m³/h max.
Operating pressure	2 – 10 bar
Operating temperature, max.	82°C
Viscosity	Water/water-like fluids
Standard retention*	150 – 1,100 microns
Vessel material	316 Stainless Steel
Elastomers	EPT/EPDM (Nordel™) or Viton®
Process connection	DN 150 Flanged PN 16
Purge connection	DN 40 Flanged PN 16
Air for actuator drive (clean, dry, non-lubricated air)	5.5 bar min. – 8 bar max. 142 l/min.
Electrical for controllers	230 VAC 50 Hz
Semi-automatic voltage	24 VDC/230 VAC

* Tighter retentions available. Please contact Eaton.

HIGH-FLOW MCS-500: FLOW RATES

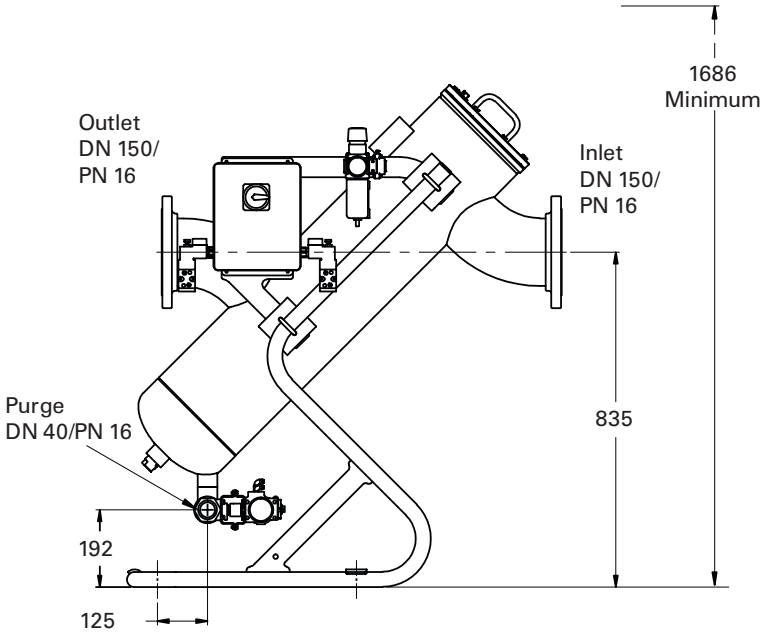


Up to eight MCS units can be configured into a multiplex system for high volume requirements

Slotted wedge wire Strainer element options

Inch	Micron	Mesh	% open area
.002	50	325	6
.003	75	200	9
.004	100	150	12
.006	150	100	17
.007	180	80	19
.008	200	70	21
.009	230	60	23
.015	380	40	33
.024	600	30	44
.030	700	20	50
.045	1,140	15	60

Additional retentions available. Please contact Eaton.



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Powering Business Worldwide

Magnetically Coupled Strainer

High-Flow MCS-1500

Mechanically Cleaned

Permanent Media

Environmentally Sustainable Design

Eaton's MCS-1500 is perfect for high-capacity straining needs. Its magnetically coupled actuation eliminates the need for dynamic seals. This technology provides quick and easy access for maintenance, reduces potential leaks and requires few moving parts while providing a long service life.

FEATURES

- No dynamic seals
- Minimal purge for low-waste operation
- Easy in-line installation
- Continuous 24/7 operation
- Maintenance-friendly design means lower labour costs
- Eco-friendly. No bags to purchase, change or landfill
- 316 stainless steel vessel

OPTIONS

- Multi-station configuration
- EPT/EPDM (Nordel™) or Viton® seal material
- Advanced programmable microprocessors
- DIN/ASME design units
- Automatic pressure transmitters
- Purge welding
- High-pressure units
- Air bleed capability
- 304 stainless steel controller enclosure
- Gauge port: 1/4"

The MCS series is engineered to conserve valuable process water while protecting costly equipment from debris. It offers minimal purge volumes in fresh water applications, allowing you to save on the cost of refill of liquids, chemical treatment and heating energy.

Featuring fast-cleaning magnetically coupled actuation, this design offers an optimised configuration to help improve and reduce costly maintenance and downtime. In addition, this actuation method eliminates the need for cover thru-holes and their associated seals.

TYPICAL APPLICATIONS

• Paper coatings • PCC/GCC slurries • phenolic resins • Petroleum-based greases • Ethanol processing • CIP fluids (sodium hydroxide) • Hot fry oils • Starch • Lime slurries • Curtain coaters • Nutraceuticals • Machining coolants • Adhesives • Paint • Ink • Chocolate • Edible oils • Detergents • Tallow

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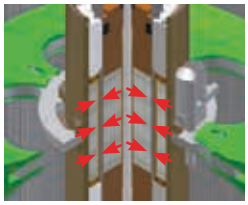


The actuation piston and cleaning disc are coupled by powerful magnets, a simple design that delivers tremendous benefits by eliminating the need for shaft or external drive seals.

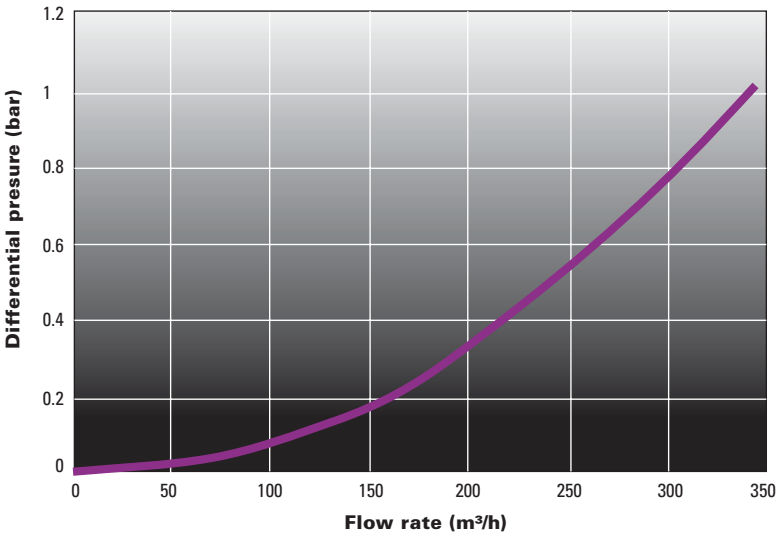
High-Flow MCS-1500: Magnetically Coupled Strainer

HIGH-FLOW MCS-1500: SPECIFICATIONS

Approx weight	352 kg
Service height	2,576 mm
Flow rate range at 100 µm	340 m³/h max.
Operating pressure	2 – 10 bar
Operating temperature,max.	82° C
Viscosity	Water/water-like fluids
Standard retention*	150 – 1,100 microns
Vessel material	316 Stainless Steel
Elastomers	EPT/EPDM (Nordel™) or Viton®
Process connection	DN 200 Flanged PN 16
Purge connection	DN 50 / PN 16
Air for actuator drive (clean, dry, non-lubricated air)	5.5 bar min. – 8 bar max. 142 l/min.
Electrical for controllers	230 VAC 50 Hz
Semi-automatic voltage	24 VDC / 230 VAC

* Tighter retentions available. Please contact Eaton.

HIGH-FLOW MCS-1500: FLOW RATES

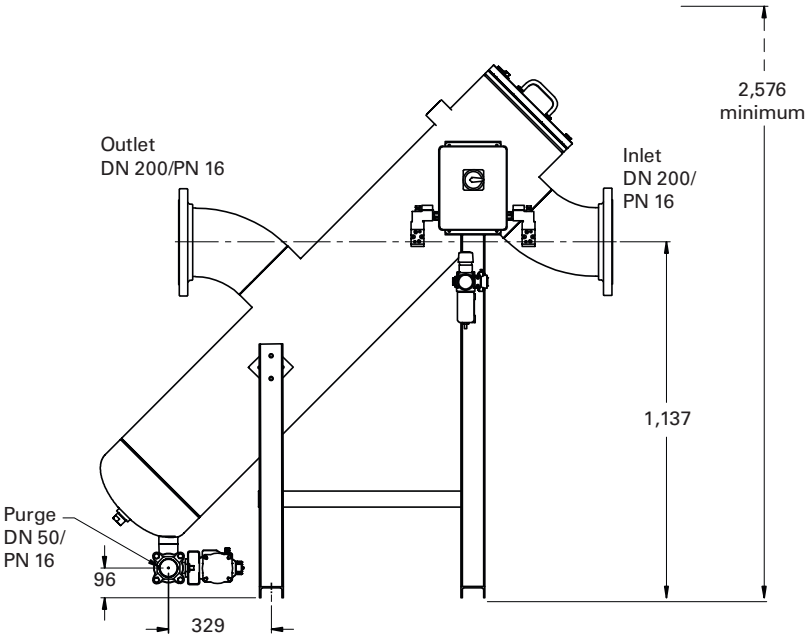


Up to eight MCS units can be configured into a multiplex system for high-volume requirements.

Slotted wedge wire Strainer element options

Inch	Micron	Mesh	% open area
.002	50	325	6
.003	75	200	9
.004	100	150	12
.006	150	100	17
.007	180	80	19
.008	200	70	21
.009	230	60	23
.015	380	40	33
.024	600	30	44
.030	700	20	50
.045	1,140	15	60

Additional retentions available. Please contact Eaton.



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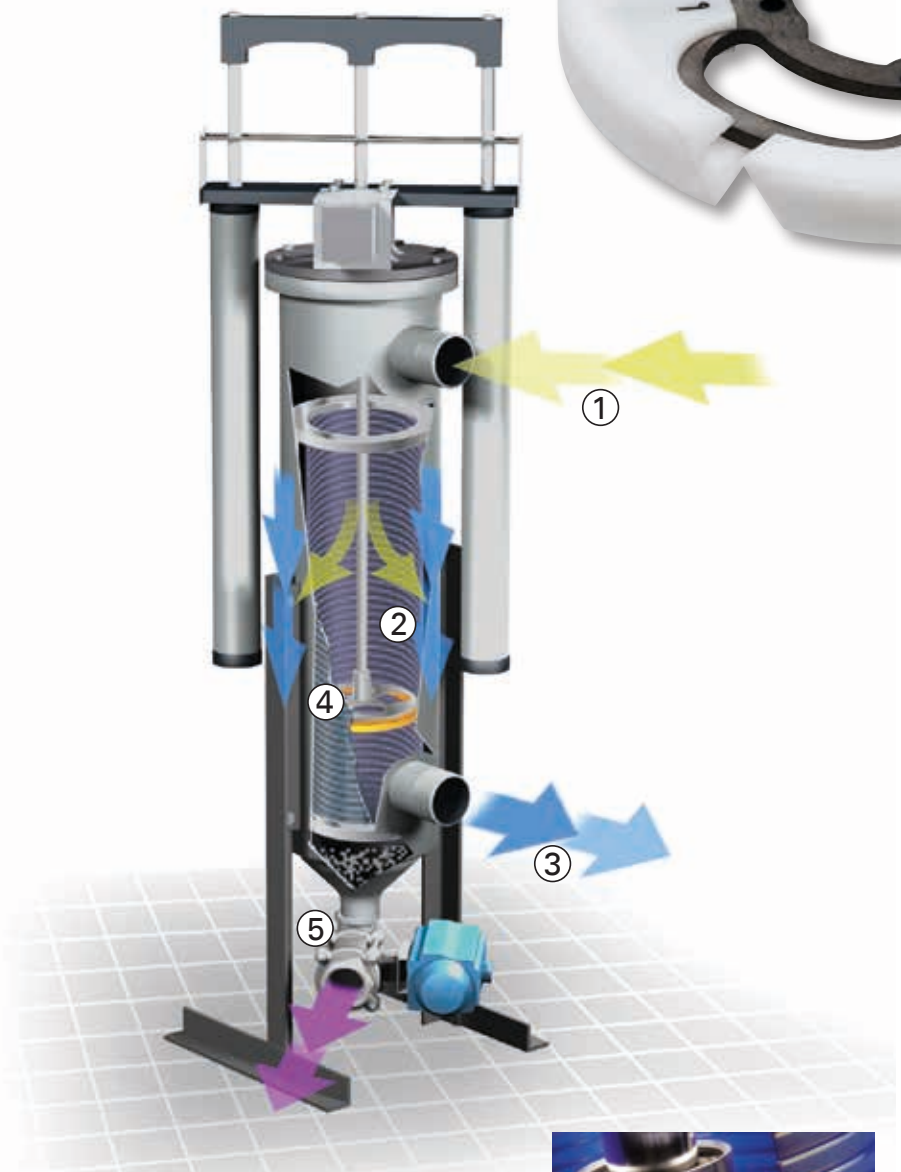
Disc Power

Our unique circular cleaning disc design (MCF series design shown) ensures precise contact with the screen to thoroughly and uniformly clean the media.

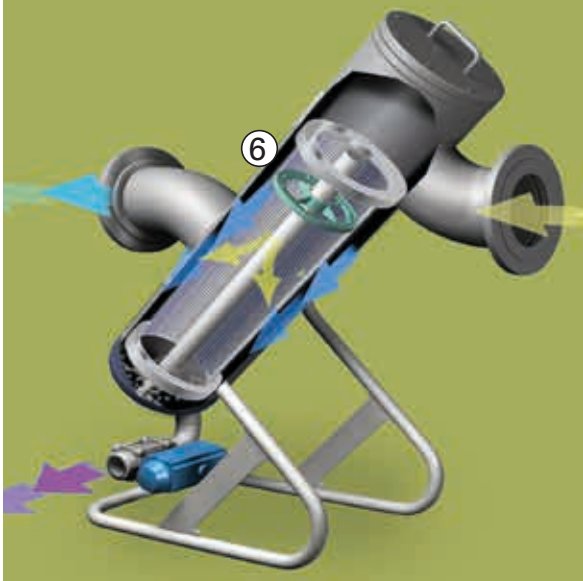


How it works

Eaton's mechanically cleaned filters are based on a simple concept: A cylindrical stainless steel housing contains a filter screen; unfiltered liquids enter the inlet; solids are deposited on the interior surface of the filtration screen; and filtered fluid exits at the outlet.

When the media requires cleaning (based on time, differential pressure and manual selection), a spring-loaded cleaning disc moves up and down, wiping the media clean of concentrated solids in both strokes. Once the debris is removed from the slotted screen, the cleaning disc directs the contaminant to the bottom of the housing and out of the flow path. This cleaning process happens while the filter remains in service, thereby maintaining process efficiency and dramatically reducing loss of valuable product.

In Eaton's DCF mechanically cleaned filter unit, incoming fluids (1) are channelled from the interior cylinder through a wire screen (2) to the outer cylinder and out the discharge port (3). A cleaning disc (4) moves up and down inside the cylinder to periodically clear the filter screen. Particles are collected at the bottom of the housing where they can be discharged (5).



Eaton MCF and MCS units operate in much the same manner as DCF units, but add the advantage of a magnetically coupled disc mechanism (6). This unique design eliminates the need for internal seals and reduces maintenance costs.

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TECHNICAL INFORMATION
Mechanically Cleaned Filters and Strainers

	DCF-400D	DCF-800D	DCF-1600D	DCF-2000	MCF	MCS-500	MCS-1500
Weight (kg)	approx. 21	approx. 45	approx. 156	approx. 256	approx. 91	approx. 159	approx. 352
Service height (mm)	approx. 1,460	approx. 1,800	approx. 2,720	approx. 2,031	approx. 1,875	approx. 1,686	approx. 2,576
Volumetric capacity (litres)	4.6	15.0	42.0	41.6	41.6	70.8	186.2
Purge chamber capacity (litres)	0.2	0.9	2.5	6	5	2.1	4.1
Filtration surface area (cm^2)	722	1,704	3,995	3,935	3,935	3,935	9,729
Flow rate range at 100 µm (m^3/h)	4.5	13.6	45.4	45.4	45.4	max. 114	max. 342
Temperature, max (C)	200°	200°	200°	200°	82°	82°	82°
Pressure, max. (bar)	10	10	10	10	10	10	10

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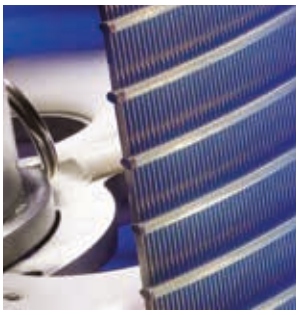
Mechanically Cleaned Filters and Strainers

Cleanable Media and System Options

Selection of media retentions and degree of automation is easy with Eaton mechanically cleaned filtration systems. Choose from 15-micron filter elements to 1/4" strainers. Manual, semi-automatic and fully microprocessor-controlled systems can be configured to suit specific operations, and the range of internal and external components helps make Eaton systems a logical choice for long-term efficiency and cost control.

MEDIA ELEMENTS

Slotted wedge wire
DCF/MCF/MCS filter screens feature special wedge wire that is perfectly circular to guarantee contact with the cleaning disc so the slot openings are smallest at the screen's surface. This design helps prevent particle plugging of the slot openings while assuring total rated solids removal.



Perforated
Perforated screens feature precise and uniform perforation patterns for complete removal of larger solids. These elements are ideal for straining large volumes of viscous fluids. 1/16", 1/8" and 1/4" perforations are available.

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Mechanically Cleaned Filter Media and Options

MEDIA RETENTIONS

Slotted wedge wire

Inch	Micron	Mesh	% open area
.0006	15	–	2
.001	25	–	3
.0015	38	400	5
.002	50	325	6
.003	75	200	9
.004	100	150	12
.006	150	100	17
.007	180	80	19
.008	200	70	21
.009	230	60	23
.015	380	40	33
.024	600	30	44
.030	700	20	50
.045	1,140	15	60

Perforated

Inch	Micron	Mesh	% open area
1/16	1,575	12	40
1/8	3,175	6	40
1/4	6,360	3	57

Additional retentions available. Please contact Eaton.

CONTROL SYSTEM CHOICES

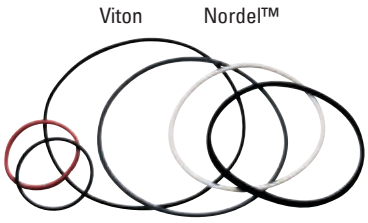
The control options for mechanically cleaned filters are as broad as the applications they serve. Available controllers include:

PLC or Smart Relay controls deliver programmable stand-alone performance; Eaton solutions range from Easy Relay to superior HMI PLC control packages. Customary PLC Options are also available on request.

DISC AND SEAL CHOICES

To meet the widest range of operating conditions and process liquid characteristics, Eaton mechanically cleaned systems are available with a number of cover and element seal elastomers and cleaning discs.

Cover and element seals



Cleaning discs

UHMWPE | Teflon or Kynar (DCF design shown) | Urethane

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QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001